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ABSTRACT

Measures of psychological types have proven useful in career counseling. This study describes research investigating the pyschometric properties of a new measure of psychological type, the Personal Preferences Self-Description Questionnaire (PPSDQ). The PPSDQ and the Myers Briggs Type Indicator (MBTI) were both administered to 221 students at a large public university. Students also completed a measure of social desirability. Reliability and divergent, concurrent, and construct validity coefficients are reported. Scores on the four PPSDQ scales had minimal common variance with social desirability scores, supporting the divergent validity of the PPSDQ. The PPSDQ measures constructs related to those of the MBTI, but the constructs are not exactly the same. Overall, results support the reliability of PPSDQ scores. Results suggest that the PPSDQ is a measure that can be administered quickly and can yield scores with reasonable psychometric properties. (Contains 12 tables and 16 references.) (Author/SLD)

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# A NEW MEASURE OF JUNGIAN PSYCHOLOGICAL TYPES FOR USE IN COUNSELING

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ABSTRACT

Measures of psychological types have proven useful in career counseling situations. The present study describes research investigating the psychometric properties of a new measure of psychological type, the Personal Preferences Self-Description Questionnaire. The PPSDQ and the MBTI were both administered to several hundred students enrolled in a large public university. Reliability and divergent, concurrent, and construct validity coefficients are reported.

## A NEW MEASURE OF JUNGIAN PSYCHOLOGICAL TYPES FOR USE IN COUNSELING

Measures of psychological types are among the most frequently used measures of personality (cf. Thompson & Ackerman, 1994). Measures of type are used for myriad educational applications, and especially (a) in career counseling and (b) in assessing educational learning styles (Myers & McCaulley, 1985).

However, this is not to suggest that measures of type have failed to provoke psychometric controversy. Paired articles debating related measurement issues have appeared, for example, in a 1989 issue of Journal of Counseling and Development (Carlson, 1989; Healy, 1989) and in a 1991 issue of Measurement and Evaluation in Counseling and Development (McCaulley, 1991; Merenda, 1991).

Measures of type are grounded in the basic precepts of Carl G. Jung's theory of psychological functions. The theory presumes that "...much of the seemingly random variation in behavior is actually quite orderly and consistent, being due to basic differences in the way individuals prefer to use their perception and judgment" (Myers & McCaulley, 1985, p. 1).

Measures of type evaluate four dimensions: Extraversion-Introversion, Sensation-INtuition, Thinking-Feeling, and Judgment-Perception. In conventional usage, scores are computed on each dimension for each preference of the dimension (e.g., Extraversion versus INtroversion), and are then dichotomized according to which orientation is preferred. Each individual is then classified into

one of the 16 types formed from all the possible combinations of the four scales, e.g., ENTJ, ISTP, and ENFP.

However, Myers and McCaulley (1985) describe a pair of studies reported by Carskadon that used self-estimate of type as a validity measure. When clients were selected to choose the type description that best suited them, their tested type was chosen to a statistically significant degree more often than chance level in both studies. These findings partially corroborate anecdotal evidence that people find types to be content valid and recognize their own type once types are described to them.

But such findings also have measurement implications: It may be possible to measure types quite simply by asking subjects to respond only to adjectival or other self-description checklists. In fact, in our previous work (cf. Melancon & Thompson, 1994, 1996; Thompson & Melancon, 1995, 1996; Thompson & Stone, 1994), we have repeatedly found across studies that reliable scores (Thompson, 1994) could be derived using self-description word-pair checklists to measure most Jungian dimensions. However, scores for various word-pair scales designed to measure the JP dimension have consistently been more unreliable. This replicated finding suggests that sentences may be required to measure the potentially more complex issues invoked by the JP construct.

The present study was conducted (a) to investigate the reliability of scores on a revised measure of type, the Personal Preferences Self-Description Questionnaire (PPSDQ), and (b) to investigate the construct validity of scores on the PPSDQ. Of

course, we took as a premise the recognition that it is scores, and not tests, which are reliable and valid, under certain circumstances and for certain purposes (Thompson, 1994).

## Method

### Subjects

We administered a revised version of the Personal Preferences Self-Description Questionnaire (PPSDQ), developed by the junior author, to 221 college students enrolled in a large public university located in the southern United States. There were more females ($n_F$=172; 77.8%) than males ($n_M$=47; 21.3%) in our sample. The mean age of the sample was 21.74 (SD=3.13). Ethnic groups within the sample included: Whites (n=146; 85.4%), African-Americans (n=4; 2.3%), and Hispanics (n=14; 8.2%). This sample was reasonably similar to our various previous samples, so results should be comparable across our studies.

### Instrumentation

The revised PPSDQ developed by the junior author consists of 93 items. The items included 55 word-pairs and 38 sentences, respectively distributed as follows across the four scales: EI, 14 word-pair items, 7 sentence items (14+7 = 21); SN, 14 word-pair items, 9 sentence items (14+9 = 23); TF, 20 word-pair items, 4 sentence items (20+4 = 24); and JP, 7 word-pair items, 18 sentence items (7+18 = 25).

Roughly half the 93 PPSDQ items measuring each of the four constructs were reversed in their wording so as to minimize response set. For example, item 1 ("Quiet-Expressive") measures

EI, but the Introversion adjective ("Quiet") is presented first within the pair. Item 5 ("Social-Private") also measures EI, but the Extraversion adjective ("Social") is presented first within this word pair.

Each of the 55 word pairs is presented as a semantic differential scale. A Likert scale ("1" to "7") is presented between each pair of words, and subjects circle the number that represents which word best describes them. Thus, unlike the Myers-Briggs Type Indicator which uses an "ipsative" or forced-choice response format, the PPSDQ uses a "normative" or non-forced-choice response format.

The 38 sentence items also invoke a "1" to "7" Likert-scale response format; the scale is presented between the anchors "Strongly Disagree" (1) and "Strongly Agree" (7). These sentence items were predominantly used to derive scores on the JP scale ($\underline{v}_{JP}$=18), though some sentences were also used to measure other scales ($\underline{v}_{EI}$=7, $\underline{v}_{SN}$=9, $\underline{v}_{TF}$=4).

## Results

Table 1 presents the correlation coefficients involving 221 sets of scores on the word-pair items, the sentence items, and both the word-pair and sentence items for the four PPSDQ scales. Table 1 also presents divergent validity coefficients for these scores and scores on a 13-item short form of the Marlowe-Crowne Social Desirability Scale (Reynolds, 1982; Strahan & Gerbasi, 1972).

INSERT TABLE 1 ABOUT HERE

Table 2 presents related correlation coefficients for a subset of 171 persons who completed both the PPSDQ and the Myers-Briggs Type Indicator; Table 2 presents concurrent validity coefficients for the four PPSDQ scales. Table 2 also presents divergent validity coefficients for the PPSDQ scores and scores on a 13-item short form of the Marlowe-Crowne Social Desirability Scale (Reynolds, 1982; Strahan & Gerbasi, 1972).

INSERT TABLE 2 ABOUT HERE

Tables 3 through 6 present uncorrected item discrimination coefficients for the 93 items. These tables also present divergent validity coefficients for the 93 PPSDQ items.

INSERT TABLES 3 THROUGH 6 ABOUT HERE

Tables 7 through 10 present corrected item discrimination coefficients and reliability analyses for the four scales. For scores on the full scales (both item types), the alpha coefficients were: .90 for EI, .86 for SN, .88 for TF, and .90 for JP.

INSERT TABLES 7 THROUGH 10 ABOUT HERE

An exploratory factor analysis was also conducted to evaluate the construct validity of PPSDQ scores (Thompson & Daniel, 1996). Table 11 presents the factor pattern/structure coefficient matrix from a principal components analysis of scores from the 93 items. The reported structure was rotated to the varimax criterion.

INSERT TABLE 11 ABOUT HERE

An oblique rotation strategy, oblimin, was also implemented to determine how correlated the factors might be when the factors were freed to be correlated. The factor pattern, the factor structure, and the factor correlation matrices are presented in Table 12.

INSERT TABLE 12 ABOUT HERE

## Discussion

The present study was undertaken (a) to investigate the reliability of scores on a measure of type, and (b) to investigate the construct validity of scores on the measure. The results presented in Table 1 suggest that scores on the four PPSDQ scales had minimal common variance with social desirability scores, ranging from $r^2 = .0067^2 = 0.0\%$ to $r^2 = .2635^2 = 6.9\%$. Related results reported in Tables 3 through 6 were also generally favorable. These results support a conclusion that PPSDQ scores have divergent validity.

The four scale concurrent validity coefficients presented in Table 2 were: EI, .81; SN, .73; TF, .63; JP, .74. The PPSDQ measures constructs related to those assessed by the MBTI, but the constructs are not exactly the same. However, these coefficients do approach the ceilings established by the reliabilities of scores on both instruments (Thompson, 1994). It is also noteworthy that correlations of PPSDQ scale scores with each other and MBTI scores with each other were reasonably comparable; most were small, with

the exception of the relationship between the SN and JP scales (i.e., $r_{XSENSINTxXJUDGPER} = .5835$, $r_{SNxJP} = .4631$). The one larger correlation that appreciably differed across the measures involved the relationship between the SN and TF scales (i.e., $r_{XSENSINTxXTHINFEE} = .6089$, $r_{SNxTF} = .2254$).

The results in Tables 7 through 10 suggest that the PPSDQ can yield reasonably reliable scores. The alpha coefficients for the four PPSDQ scales using both item types ranged from .86 to .90.

The factor analytic results presented in Table 11 bear upon construct validity (Thompson & Daniel, 1996). The items generally correlated with the expected factors, and the items that were reversed in their content had opposite signs from their companion items, as expected.

When the factors were obliquely rotated, the factors tended to remain uncorrelated. As reported in Table 12, the factor correlations ranged from $r^2 = .07382^2 = 0.5\%$ to $r^2 = .20694^2 = 4.3\%$. These results suggest that orthogonal rotation of PPSDQ factors is appropriate, and that the four constructs are discrete, as expected.

In summary, our results suggest that a measure that can be quickly administered, and consisting largely of self-descriptive word pairs, can be used to yield scores with reasonable psychometric properties. Potential practical uses have already been documented using related measures, and include both career counseling and assessment of learning styles. Our results across studies also suggest that preferences for Judging or Perceiving

apparently can not be fully assessed using only word pairs. These concepts seem to require measurement using sentences to elaborate more complex ideas. It appears that JP dynamics are more complex than the other dimensions of Jungian types.

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Table 1
Correlation Coefficients Among Word-Pair, Sentence, Social Desirability, and Combined (Word-Pair and Sentence) Subscale Scores
($n$ = 221)

| | AINTREXT | ASENSINT | ATHINFEE | AJUDGPER | SINTREXT | SSENSINT | STHINFEE | SJUDGPER | SOCLDESR | XINTEXTR | XSENSINT | XTHINFEE | XJUDGPER |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AINTREXT | 1.0000 | | | | | | | | | | | | |
| ASENSINT | -.2661** | 1.0000 | | | | | | | | | | | |
| ATHINFEE | -.2383** | .3566** | 1.0000 | | | | | | | | | | |
| AJUDGPER | -.1454* | .6824** | .3281** | 1.0000 | | | | | | | | | |
| SINTREXT | .7413** | -.1873** | -.2546** | -.2065** | 1.0000 | | | | | | | | |
| SSENSINT | -.1243 | .5666** | .1902** | .3398** | -.1925** | 1.0000 | | | | | | | |
| STHINFEE | -.0302 | .1437* | .5776** | .1685* | -.0507 | .0862 | 1.0000 | | | | | | |
| SJUDGPER | -.1657* | .5354** | .1375* | .6855** | -.1877** | .2869** | .1032 | 1.0000 | | | | | |
| SOCLDESR | -.0197 | .0195 | .2099** | -.0017 | -.1405* | .2121** | .0839 | .0097 | 1.0000 | | | | |
| XINTEXTR | .9585** | -.2508** | -.2615** | -.1813** | .9019** | -.1618* | -.0410 | -.1864** | -.0724 | 1.0000 | | | |
| XSENSINT | -.2325** | .9206** | .3227** | .6060** | -.2134** | .8434** | .1345* | .4851** | .1133 | -.2403** | 1.0000 | | |
| XTHINFEE | -.2503** | .5339** | .9116** | .4153** | -.2925** | .5769** | .5167** | .2345** | .2635** | -.2853** | .6215** | 1.0000 | |
| XJUDGPER | -.1714* | .6234** | .2103** | .8396** | -.2078** | .3256** | .1323* | .9710** | .0067 | -.1986** | .5608** | .3112** | 1.0000 |

Note. Scale names beginning with "A" involved scores computed only for word-pair items; scale names beginning with "S" involved scores computed only for sentence items; scale names beginning with "X" involved scores computed for both word-pair and sentence items.

* $p < .05$ ** $p < .01$

## Table 2
## Correlation Coefficients Among Word-Pair, Sentence, Social Desirability, Combined (Word-Pair and Sentence) Subscale Scores, and MBTI Scores
## (n = 171)

| | AINTREXT | ASENSINT | ATHINFEE | AJUDGPER | SINTREXT | SSENSINT | STHINFEE | SJUDGPER | SOCLDESR | XINTEXTR | XSENSINT | XTHINFEE | XJUDGPER | EI | SN | TF | JP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AINTREXT | 1.0000 | | | | | | | | | | | | | | | | |
| ASENSINT | -.2312** | 1.0000 | | | | | | | | | | | | | | | |
| ATHINFEE | -.1885* | .3230** | 1.0000 | | | | | | | | | | | | | | |
| AJUDGPER | -.0963 | .6985** | .3092** | 1.0000 | | | | | | | | | | | | | |
| SINTREXT | .7348** | -.1836* | -.2553** | -.1998** | 1.0000 | | | | | | | | | | | | |
| SSENSINT | -.1117 | .5461** | .1857* | .3631** | -.1986** | 1.0000 | | | | | | | | | | | |
| STHINFEE | .0048 | .0764 | .5695** | .1009 | -.0376 | .0767 | 1.0000 | | | | | | | | | | |
| SJUDGPER | -.2073** | .5663** | .1405 | .7240** | -.2368** | .2963** | .0695 | 1.0000 | | | | | | | | | |
| SOCLDESR | -.0471 | .0007 | .2208** | .0332 | -.1914* | .2417** | .1326 | .0354 | 1.0000 | | | | | | | | |
| XINTEXTR | .9567** | -.2270** | -.2305** | -.1475 | .9005** | -.1569* | -.0130 | -.2346** | -.1124 | 1.0000 | | | | | | | |
| XSENSINT | -.2042** | .9140** | .2997** | .6295** | -.2155** | .8390** | .0868 | .5113** | .1176 | -.2235** | 1.0000 | | | | | | |
| XTHINFEE | -.2038** | .5020** | .9061** | .4118** | -.2964** | .5840** | .5035** | .2437** | .2865** | -.2580** | .6089** | 1.0000 | | | | | |
| XJUDGPER | -.1841* | .6467** | .2053** | .8621** | -.2400** | .3376** | .0844 | .9737** | .0370 | -.2211** | .5835** | .3150** | 1.0000 | | | | |
| EI | .7744** | -.1965* | -.1759* | -.1254 | .7365** | -.1493 | -.0159 | -.1954* | -.0621 | .8127** | -.2000** | -.2096** | -.1849* | 1.0000 | | | |
| SN | -.2300** | .6446** | .2298** | .4468** | -.1637* | .6472** | .0947 | .4245** | .0549 | -.2177** | .7321** | .4686** | .4594** | -.1550* | 1.0000 | | |
| TF | -.0834 | .1265 | .7267** | .1910* | -.1577* | .0742 | .5195** | .0666 | .2279** | -.1212 | .1181 | .6323** | .1120 | -.0419 | .2254** | 1.0000 | |
| JP | -.0911 | .5530** | .2007** | .6695** | -.1522* | .3388** | .1358 | .7039** | .0135 | -.1238 | .5233** | .3117** | .7382** | -.1131 | .4631** | .1822* | 1.0000 |

Note. Scale names beginning with "A" involved scores computed only for word-pair items; scale names beginning with "S" involved scores computed only for sentence items; scale names beginning with "X" involved scores computed for both word-pair and sentence items. MBTI scale scores are labeled "EI" through "JP."

* p < .05 ** p < .01

Table 3
Uncorrected Item Discrimination Coefficients for EI Scale Items
(n=221/171, v=21)

| Variable | XINTEXTR | XSENSINT | XTHINFEE | XJUDGPER | SOCLDESR |
|---|---|---|---|---|---|
| SOCIPRIV | .6707** | -.0804 | -.1208 | -.1063 | .0070 |
| FRIEDIST | .5753** | -.1245 | -.2626** | -.0465 | -.1596* |
| PERSOSHY | .6778** | -.1397* | -.2024** | -.0608 | -.0875 |
| APPRMYST | .2614** | .1067 | -.1409* | .1306 | -.2418** |
| MIXERLON | .7374** | -.1553* | -.2540** | -.0995 | -.0914 |
| CONGRECL | .5706** | -.1447* | -.2110** | -.0805 | -.0034 |
| EXUBSERE | .5662** | -.0497 | -.0486 | -.0250 | .0933 |
| GREGTIMI | .5480** | -.1175 | .0069 | -.0211 | .0108 |
| XQUIEEXP | .7374** | -.2851** | -.1277 | -.1848** | .0869 |
| XREFLACT | .3649** | .0264 | .0860 | -.0865 | -.0078 |
| XINTREXT | .6775** | -.2305** | -.1923** | -.2016** | .0652 |
| XSTILLAN | .5950** | -.3899** | -.2584** | -.3247** | .0826 |
| XSOLIAMI | .6219** | -.2122** | -.3170** | -.0748 | -.1166 |
| XSILEGAB | .6850** | -.2018** | -.1749** | -.2529** | .1233 |
| SHYPERSO | .6273** | -.0189 | .0053 | -.0353 | -.0962 |
| PRESWRIT | .5119** | -.1850** | -.1498* | -.2207** | -.1148 |
| XGRPPROJ | .4604** | -.0681 | -.1589* | -.1668* | -.1530* |
| XRELAXSO | .6932** | -.1287 | -.1683* | -.1986** | -.0122 |
| XLIKETAL | .4634** | -.1279 | -.3880** | -.0149 | -.0365 |
| XNEWPEOP | .6428** | -.2907** | -.2608** | -.1612* | -.1498* |
| XTALKOTH | .7237** | -.2104** | -.2707** | -.1437* | -.0739 |

| Variable | EI | SN | TF | JP |
|---|---|---|---|---|
| SOCIPRIV | .4860** | -.0863 | -.0890 | -.0919 |
| FRIEDIST | .4905** | .0554 | -.1220 | -.0165 |
| PERSOSHY | .5613** | -.1355 | -.0190 | -.0807 |
| APPRMYST | .2460** | .0567 | -.1792* | .1174 |
| MIXERLON | .6039** | -.1375 | -.1642* | -.0379 |
| CONGRECL | .4747** | -.1585* | .0007 | -.0753 |
| EXUBSERE | .4036** | -.1208 | .0647 | .0376 |
| GREGTIMI | .4679** | -.1298 | .1597* | .0154 |
| XQUIEEXP | .6799** | -.2624** | .0250 | -.1366 |
| XREFLACT | .1950* | .0075 | .0645 | -.0026 |
| XINTREXT | .6133** | -.2432** | -.0868 | -.0708 |
| XSTILLAN | .4844** | -.3830** | -.1193 | -.2198** |
| XSOLIAMI | .4719** | -.2245** | -.1382 | -.0111 |
| XSILEGAB | .6455** | -.2119** | -.1490 | -.1859* |
| SHYPERSO | .5272** | -.0328 | .0718 | -.0557 |
| PRESWRIT | .4510** | -.1278 | -.0548 | -.1615* |
| XGRPPROJ | .3301** | -.0802 | -.2035** | -.1098 |
| XRELAXSO | .5746** | -.0841 | -.0292 | -.1172 |
| XLIKETAL | .4108** | -.2016** | -.3372** | -.0327 |
| XNEWPEOP | .5341** | -.1194 | -.1088 | -.1515* |
| XTALKOTH | .6472** | -.1389 | -.1054 | -.0961 |

Note. The n for PPSDQ data alone was 221; the n for the number of participants with both PPSDQ and MBTI data was a subset of 171 persons.

Table 4
Uncorrected Item Discrimination Coefficients for SN Scale Items
(n=221/171, v=23)

| Variable | XINTEXTR | XSENSINT | XTHINFEE | XJUDGPER | SOCLDESR |
|---|---|---|---|---|---|
| REALINTU | -.1438* | .4596** | .3776** | .1858** | .0675 |
| PRECIMAG | -.2102** | .6364** | .4558** | .4218** | -.0348 |
| CONCEXPL | -.2048** | .5603** | .2333** | .4750** | -.0381 |
| TRADCREA | -.1293 | .5770** | .3761** | .1965** | .1025 |
| DIRINGEN | -.0798 | .4628** | .0819 | .2255** | -.0363 |
| PLANVISI | -.1342* | .6152** | .2865** | .5041** | .0168 |
| PRACTHEO | .0445 | .3177** | -.0040 | .2332** | -.1653* |
| XINSISYS | -.1354* | .4829** | .2894** | .3140** | -.0023 |
| XVARIREP | -.2566** | .4483** | .3130** | .3785** | .0938 |
| XINVENOR | -.1234 | .6364** | .3964** | .5440** | .0132 |
| XINQUCRI | -.1684* | .4181** | .4415** | .2112** | .1713* |
| XDIVERCO | -.1884** | .4494** | .3339** | .3699** | -.0108 |
| XDIVEPRE | -.1743** | .5047** | .2927** | .4234** | .0171 |
| XCONCREA | .0354 | .3529** | .0848 | .1919** | -.0752 |
| DIFFPERS | -.1255 | .4571** | .4243** | .2073** | .3220** |
| USEINTUI | -.1844** | .4237** | .2508** | .1352* | .0724 |
| SEEPATTR | .0171 | .3653** | .1543* | -.0091 | .0439 |
| NEWSKILL | -.0050 | .2172** | .1172 | .0431 | .0964 |
| SEEMEANG | -.0040 | .3505** | .1994** | -.0922 | .1589* |
| INVENTIV | -.2245** | .6939** | .3770** | .3912** | .1558* |
| CREATNEW | -.1301 | .6233** | .4358** | .2254** | .0876 |
| XPREFFAC | -.0504 | .4973** | .3723** | .2893** | .0525 |
| XMECHANI | -.1306 | .6460** | .5432** | .3689** | .1091 |

| Variable | EI | SN | TF | JP |
|---|---|---|---|---|
| REALINTU | -.1453 | .2036** | .2194** | .1442 |
| PRECIMAG | -.1369 | .4807** | .1915* | .3609** |
| CONCEXPL | -.1866* | .4104** | -.0313 | .3911** |
| TRADCREA | -.1030 | .4805** | .1510* | .2062** |
| DIRINGEN | -.1137 | .2682** | -.1886* | .1880* |
| PLANVISI | -.0962 | .3427** | -.0188 | .4458** |
| PRACTHEO | -.0298 | .2539** | -.1302 | .2179** |
| XINSISYS | -.0771 | .3112** | .0794 | .3738** |
| XVARIREP | -.2194** | .2896** | .0329 | .2742** |
| XINVENOR | -.0398 | .4997** | .1557* | .4742** |
| XINQUCRI | -.1244 | .2456** | .2250** | .1116 |
| XDIVERCO | -.1185 | .3120** | .1141 | .3369** |
| XDIVEPRE | -.0584 | .3067** | .0128 | .3401** |
| XCONCREA | .0033 | .2825** | .0392 | .1484 |
| DIFFPERS | -.0757 | .3560** | .2861** | .2309** |
| USEINTUI | -.0948 | .2951** | -.0591 | .1791* |
| SEEPATTR | -.0372 | .2941** | -.0586 | .1263 |
| NEWSKILL | .0476 | .0734 | -.1214 | .0164 |
| SEEMEANG | -.0472 | .2541** | -.0722 | .0354 |
| INVENTIV | -.2074** | .5150** | .0771 | .3276** |
| CREATNEW | -.0980 | .4883** | .0912 | .1754* |
| XPREFFAC | -.1181 | .4847** | -.0004 | .2385** |
| XMECHANI | -.1278 | .5117** | .1989** | .3642** |

Table 5
Uncorrected Item Discrimination Coefficients for TF Scale Items
(n=221/171, v=24)

| Variable | XINTEXTR | XSENSINT | XTHINFEE | XJUDGPER | SOCLDESR |
|---|---|---|---|---|---|
| DISPEMOT | -.0681 | .0504 | .4220** | -.0231 | -.0210 |
| JUSTHARM | -.0478 | .1950** | .4573** | .1685* | .2184** |
| EVALOPEN | -.3523** | .3218** | .5381** | .2230** | .1058 |
| IMPEPERS | -.3883** | .2152** | .4398** | -.0091 | .1081 |
| PRINPEOP | -.1409* | .1738** | .4002** | .1785** | -.0490 |
| EVALNONJ | -.0827 | .2265** | .4982** | .1262 | .2815** |
| FACTCOMP | -.1938** | .1979** | .6672** | .1179 | .1836** |
| LOGHUMAN | -.0174 | .1910** | .4772** | .0737 | -.0288 |
| SKEPTRUS | -.1897** | .0360 | .4564** | .0872 | .1275 |
| STRIFORG | -.1793** | .2541** | .6142** | .1579* | .1409* |
| XEMPALOG | -.0264 | .1902** | .5646** | .1017 | .1196 |
| XCARICOO | -.1334* | .0843 | .5348** | -.1159 | .2596** |
| XRECEPSE | -.2245** | .1936** | .4318** | .1448* | .1554* |
| XSYMPFAI | .0215 | .2330** | .4986** | .1855** | .0435 |
| XGULLSUS | -.1122 | -.0192 | .3931** | .0840 | .0375 |
| XKINDANA | -.0539 | .1776** | .6121** | .1166 | .0623 |
| XFEELTHI | -.1446* | .1979** | .5700** | .1189 | .1426* |
| XTENDRAT | -.1058 | .1241 | .5347** | .1046 | .0574 |
| XACCEDIS | -.3166** | .2974** | .5564** | .1458* | .3042** |
| XLIGHPRU | -.2636** | .2539** | .4715** | .2684** | .0576 |
| AVOIDCON | .2537** | -.0557 | .1598* | -.0114 | -.1072 |
| EMOTIONL | -.2556** | .1608* | .4736** | .0388 | .1159 |
| SENSITIV | .0207 | .0422 | .3028** | .0506 | .0960 |
| XBUSINES | -.1710* | .1955** | .3374** | .2371** | .1180 |

| Variable | EI | SN | TF | JP |
|---|---|---|---|---|
| DISPEMOT | -.1052 | .0812 | .4747** | -.0379 |
| JUSTHARM | -.0081 | .1000 | .3748** | .1772* |
| EVALOPEN | -.3060** | .1597* | .2656** | .1556* |
| IMPEPERS | -.3302** | .1679* | .1973** | -.0530 |
| PRINPEOP | -.0837 | .2370** | .3231** | .1813* |
| EVALNONJ | -.0697 | .1078 | .3316** | .1392 |
| FACTCOMP | -.1009 | .0848 | .5274** | .1520* |
| LOGHUMAN | .0589 | .1474 | .2996** | .0505 |
| SKEPTRUS | -.2219** | .0060 | .4340** | .1347 |
| STRIFORG | -.0422 | .1440 | .4685** | .1339 |
| XEMPALOG | -.0616 | .1424 | .4411** | .1003 |
| XCARICOO | -.0236 | .0613 | .5190** | -.0490 |
| XRECEPSE | -.1740* | .2471** | .3266** | .1111 |
| XSYMPFAI | .1028 | .1623* | .3626** | .1525* |
| XGULLSUS | -.1426 | .0306 | .3880** | .0556 |
| XKINDANA | .0088 | .0801 | .5192** | .1208 |
| XFEELTHI | -.0707 | .1753* | .5406** | .1696* |
| XTENDRAT | -.0438 | .1075 | .4801** | .0401 |
| XACCEDIS | -.1511* | .1480 | .3577** | .1353 |
| XLIGHPRU | -.2224** | .1142 | .2234** | .2074** |
| AVOIDCON | .2677** | -.0508 | .2290** | .0482 |
| EMOTIONL | -.1417 | .1275 | .4192** | .0823 |
| SENSITIV | .0194 | -.0199 | .3015** | .0066 |
| XBUSINES | -.2290** | .1883* | .3204** | .1873* |

Table 6
Uncorrected Item Discrimination Coefficients for JP Scale Items
(n=221/171, v=25)

| Variable | XINTEXTR | XSENSINT | XTHINFEE | XJUDGPER | SOCLDESR |
|---|---|---|---|---|---|
| RESPADAP | -.0800 | .4278** | .2430** | .4625** | -.0376 |
| PROMFREE | -.1281 | .4234** | .3854** | .5992** | -.0139 |
| TIMERELA | -.0413 | .3726** | .3039** | .5794** | .0848 |
| XFLEXORG | -.1207 | .4558** | .2653** | .6357** | .0469 |
| XRANDSEQ | -.2430** | .4513** | .2520** | .6531** | -.0941 |
| XIMPUDEL | -.2143** | .3344** | .3027** | .4622** | .0018 |
| XIMPETAS | -.0419 | .4062** | .1884** | .5860** | -.0107 |
| UNSCHEDU | -.0816 | .2418** | .0786 | .6020** | -.0035 |
| LASTMINU | -.0814 | .1918** | .0422 | .4940** | -.0230 |
| UNEXPECT | -.1759** | .3472** | .2078** | .5664** | .0143 |
| NOORGANI | -.1527* | .4074** | .3487** | .5786** | .0113 |
| GOWIFLOW | -.1176 | .2354** | .2466** | .5531** | .0106 |
| LASTMINT | -.1066 | .3051** | .0724 | .5168** | -.0133 |
| FORMOMEN | -.1793** | .3714** | .3006** | .5904** | .0879 |
| ORDERIRR | .0130 | .2392** | .0193 | .5052** | -.0897 |
| XTHINKAH | -.0042 | .0201 | .0256 | .4186** | .0532 |
| XIMPULSI | -.2854** | .4502** | .2629** | .5227** | .0617 |
| XSTRUTIM | -.1837** | .2856** | .1877** | .6314** | .0522 |
| XENJLIST | .0415 | .2759** | .0420 | .5667** | .0350 |
| XHATERUS | -.0861 | .1997** | -.0261 | .5265** | -.0733 |
| XROUCOMF | -.2292** | .4508** | .2129** | .6239** | -.0019 |
| XLCLOSUR | -.0962 | .1888** | .1062 | .3357** | .1287 |
| XBEONTIM | -.0586 | .1897** | .1589* | .5531** | -.1031 |
| XCOMMITM | -.0227 | .1035 | -.0499 | .3115** | -.0108 |
| XPLANAHE | -.0417 | .2826** | .0917 | .7197** | -.0240 |

| Variable | EI | SN | TF | JP |
|---|---|---|---|---|
| RESPADAP | -.0821 | .3255** | .0518 | .3561** |
| PROMFREE | -.0755 | .3549** | .1912* | .4654** |
| TIMERELA | -.0350 | .2696** | .1437 | .4867** |
| XFLEXORG | -.0806 | .3154** | .1282 | .5686** |
| XRANDSEQ | -.2297** | .3466** | .0904 | .5315** |
| XIMPUDEL | -.1195 | .2528** | .2565** | .3846** |
| XIMPETAS | .0175 | .2937** | .0558 | .4444** |
| UNSCHEDU | -.1209 | .1415 | -.0388 | .4735** |
| LASTMINU | -.0994 | .1363 | -.0904 | .2599** |
| UNEXPECT | -.1251 | .3177** | .0703 | .4848** |
| NOORGANI | -.0856 | .3948** | .2400** | .4591** |
| GOWIFLOW | -.0603 | .1706* | .1907* | .4035** |
| LASTMINT | -.0949 | .2209** | -.0521 | .2632** |
| FORMOMEN | -.1036 | .2697** | .2031** | .5364** |
| ORDERIRR | -.0661 | .2208** | .0111 | .4457** |
| XTHINKAH | -.0075 | .0636 | .1660* | .2962** |
| XIMPULSI | -.3221** | .4141** | -.0014 | .3482** |
| XSTRUTIM | -.1278 | .2314** | .0807 | .4709** |
| XENJLIST | -.0060 | .2009** | -.0136 | .5367** |
| XHATERUS | -.1389 | .1705* | -.1808* | .2082** |

| | | | | |
|---|---|---|---|---|
| XROUCOMF | -.2579** | .4138** | .0164 | .4487** |
| XLCLOSUR | -.0752 | .2918** | .0267 | .2403** |
| XBEONTIM | -.0859 | .2059** | .1552* | .4066** |
| XCOMMITM | -.0899 | .0924 | -.1123 | .1585* |
| XPLANAHE | -.0985 | .3027** | .0717 | .6022** |

Table 7
Reliability Analysis for EI Scale Items
(n=221, v=21)

| Variable | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | α if Item Deleted |
|---|---|---|---|---|
| SOCIPRIV | 63.0935 | 304.2331 | .6224 | .8961 |
| FRIEDIST | 64.4600 | 317.7506 | .5355 | .8990 |
| PERSOSHY | 63.6772 | 304.0992 | .6307 | .8959 |
| APPRMYST | 63.8130 | 327.7020 | .1920 | .9059 |
| MIXERLON | 63.3605 | 302.4192 | .6993 | .8944 |
| CONGRECL | 63.4285 | 315.4007 | .5250 | .8989 |
| EXUBSERE | 62.6727 | 311.7729 | .5117 | .8989 |
| GREGTIMI | 62.8446 | 313.3551 | .4936 | .8993 |
| XQUIEEXP | 63.2473 | 302.0685 | .6988 | .8943 |
| XREFLACT | 62.9235 | 321.8980 | .2961 | .9039 |
| XINTREXT | 62.9849 | 305.7488 | .6329 | .8960 |
| XSTILLAN | 63.2881 | 308.9769 | .5401 | .8982 |
| XSOLIAMI | 63.2011 | 312.0496 | .5781 | .8977 |
| XSILEGAB | 62.8853 | 303.5227 | .6384 | .8957 |
| SHYPERSO | 62.3653 | 298.0673 | .5574 | .8981 |
| PRESWRIT | 62.8808 | 306.0887 | .4281 | .9023 |
| XGRPPROJ | 62.7360 | 309.1878 | .3696 | .9043 |
| XRELAXSO | 63.0437 | 299.4273 | .6421 | .8953 |
| XLIKETAL | 63.6546 | 314.0623 | .3911 | .9021 |
| XNEWPEOP | 63.9623 | 312.0105 | .6024 | .8973 |
| XTALKOTH | 63.1387 | 294.1729 | .6719 | .8943 |

α = .9029

Table 8
Reliability Analysis for SN Scale Items
(n=221, v=23)

| Variable | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | α if Item Deleted |
|---|---|---|---|---|
| REALINTU | 94.9485 | 258.9634 | .3879 | .8507 |
| PRECIMAG | 94.1317 | 249.6640 | .5791 | .8439 |
| CONCEXPL | 93.6996 | 254.7280 | .4989 | .8470 |
| TRADCREA | 94.3693 | 249.2700 | .5036 | .8464 |
| DIRINGEN | 94.4994 | 262.1881 | .4052 | .8504 |
| PLANVISI | 94.2607 | 249.9970 | .5538 | .8447 |
| PRACTHEO | 95.2516 | 266.5879 | .2438 | .8552 |
| XINSISYS | 93.8668 | 257.9407 | .4134 | .8498 |
| XVARIREP | 93.7675 | 259.1615 | .3744 | .8512 |
| XINVENOR | 94.7086 | 247.5948 | .5743 | .8437 |
| XINQUCRI | 93.9530 | 262.5194 | .3512 | .8519 |
| XDIVERCO | 94.4779 | 258.1140 | .3710 | .8514 |
| XDIVEPRE | 94.5276 | 256.9220 | .4370 | .8490 |
| XCONCREA | 95.2200 | 265.0007 | .2804 | .8541 |
| DIFFPERS | 93.4733 | 258.2431 | .3817 | .8510 |
| USEINTUI | 93.2019 | 263.1442 | .3611 | .8516 |
| SEEPATTR | 93.5593 | 264.0746 | .2912 | .8538 |
| NEWSKILL | 94.1039 | 269.7591 | .1221 | .8608 |
| SEEMEANG | 93.3763 | 264.6786 | .2752 | .8543 |
| INVENTIV | 94.1883 | 245.9335 | .6419 | .8414 |
| CREATNEW | 93.5005 | 249.9787 | .5638 | .8444 |
| XPREFFAC | 95.1702 | 251.4230 | .4063 | .8507 |
| XMECHANI | 93.8591 | 241.6203 | .5723 | .8432 |

α = .8553

Table 9
Reliability Analysis for TF Scale Items
(n=221, v=24)

| Variable | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | α if Item Deleted |
|---|---|---|---|---|
| DISPEMOT | 107.8188 | 313.4294 | .4696 | .8784 |
| JUSTHARM | 109.4161 | 309.5469 | .3961 | .8802 |
| EVALOPEN | 108.9202 | 308.5900 | .4732 | .8780 |
| IMPEPERS | 107.5564 | 320.1739 | .3822 | .8805 |
| PRINPEOP | 108.6300 | 310.8225 | .3701 | .8810 |
| EVALNONJ | 109.3256 | 307.0431 | .4329 | .8792 |
| FACTCOMP | 108.5111 | 300.1390 | .6829 | .8727 |
| LOGHUMAN | 108.9953 | 309.5994 | .4264 | .8793 |
| SKEPTRUS | 108.7645 | 302.8073 | .4897 | .8776 |
| STRIFORG | 108.2306 | 303.4623 | .6149 | .8745 |
| XEMPALOG | 109.3846 | 300.6829 | .5815 | .8749 |
| XCARICOO | 107.7374 | 309.3065 | .5324 | .8768 |
| XRECEPSE | 109.0872 | 312.1459 | .3944 | .8801 |
| XSYMPFAI | 109.5111 | 307.2926 | .4704 | .8781 |
| XGULLSUS | 109.5247 | 309.5047 | .4359 | .8790 |
| XKINDANA | 108.1672 | 303.3851 | .6174 | .8745 |
| XFEELTHI | 108.7690 | 301.7946 | .5914 | .8748 |
| XTENDRAT | 108.7238 | 304.5471 | .5498 | .8760 |
| XACCEDIS | 108.2215 | 308.9153 | .4480 | .8787 |
| XLIGHPRU | 108.3528 | 313.9357 | .4306 | .8792 |
| AVOIDCON | 109.0767 | 315.6240 | .2390 | .8858 |
| EMOTIONL | 108.1220 | 307.3847 | .4989 | .8773 |
| SENSITIV | 109.4025 | 310.1540 | .3650 | .8813 |
| XBUSINES | 108.9455 | 311.9931 | .3220 | .8827 |

α = .8829

Table 10
Reliability Analysis for JP Scale Items
(n=221, v=25)

| Variable | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | α if Item Deleted |
|---|---|---|---|---|
| RESPADAP | 84.5814 | 443.5623 | .4042 | .8977 |
| PROMFREE | 84.0705 | 430.2208 | .5447 | .8947 |
| TIMERELA | 84.0162 | 433.0980 | .5253 | .8951 |
| XFLEXORG | 84.0165 | 430.3300 | .5885 | .8938 |
| XRANDSEQ | 84.1564 | 433.2606 | .6125 | .8936 |
| XIMPUDEL | 83.7122 | 446.9638 | .4117 | .8975 |
| XIMPETAS | 84.5955 | 442.9125 | .5479 | .8954 |
| UNSCHEDU | 84.2288 | 429.5913 | .5471 | .8946 |
| LASTMINU | 84.1293 | 433.1340 | .4196 | .8982 |
| UNEXPECT | 83.8216 | 433.0898 | .5096 | .8955 |
| NOORGANI | 83.6406 | 429.1912 | .5180 | .8953 |
| GOWIFLOW | 83.8261 | 435.1130 | .4969 | .8958 |
| LASTMINT | 83.9076 | 433.7558 | .4498 | .8971 |
| FORMOMEN | 83.7718 | 433.8631 | .5396 | .8949 |
| ORDERIRR | 85.5048 | 443.5158 | .4553 | .8967 |
| XTHINKAH | 85.2967 | 448.4842 | .3631 | .8984 |
| XIMPULSI | 83.9165 | 438.7977 | .4670 | .8964 |
| XSTRUTIM | 83.5139 | 429.3041 | .5820 | .8938 |
| XENJLIST | 84.8035 | 429.1366 | .5032 | .8958 |
| XHATERUS | 84.3103 | 433.4591 | .4613 | .8968 |
| XROUCOMF | 84.7311 | 435.4338 | .5812 | .8942 |
| XLCLOSUR | 84.2438 | 454.2516 | .2791 | .8999 |
| XBEONTIM | 85.4551 | 438.4025 | .5026 | .8957 |
| XCOMMITM | 85.1623 | 454.7435 | .2502 | .9006 |
| XPLANAHE | 85.0659 | 428.3665 | .6847 | .8920 |

α = .8998

Table 11
Varimax-Rotated Factor Pattern/Structure Coefficient Matrix
($n$=221, $v$=93)

| Variable | Factor I | II | III | IV |
|---|---|---|---|---|
| SOCIPRIV | .07260 | -.06893 | -.68327 | .09876 |
| FRIEDIST | -.07967 | -.27730 | -.56503 | -.03240 |
| PERSOSHY | -.03838 | -.08796 | -.68348 | -.08177 |
| APPRMYST | -.21429 | -.22259 | -.24490 | .13694 |
| MIXERLON | .03071 | -.20343 | -.72337 | .03042 |
| CONGRECL | -.00048 | -.17361 | -.56501 | -.04020 |
| EXUBSERE | .00197 | .04838 | -.57535 | .02777 |
| GREGTIMI | -.05571 | .22251 | -.57526 | -.18874 |
| QUIEEXPR | -.11063 | -.07392 | .73820 | .21724 |
| REFLACTI | -.11629 | -.16731 | .40956 | -.16178 |
| INTREXTR | -.12753 | .02004 | .66179 | .13045 |
| STILLANI | -.26535 | .11671 | .55151 | .22285 |
| SOLIAMIC | .01234 | .26096 | .59774 | .08546 |
| SILEGABB | -.21801 | .07142 | .65040 | -.00799 |
| SHYPERSO | -.00450 | .15381 | -.65101 | .04542 |
| PRESWRIT | .14974 | -.00139 | -.45770 | -.08421 |
| GRPPROJE | -.16070 | .10907 | .39496 | -.12705 |
| RELAXSOC | -.15706 | .04924 | .68625 | -.07294 |
| LIKETALK | .09887 | .45031 | .39000 | .04120 |
| NEWPEOPL | -.06615 | .14143 | .63351 | .17289 |
| TALKOTHR | -.04560 | .13845 | .69380 | .10458 |
| REALINTU | -.10484 | .30917 | .05866 | .39652 |
| PRECIMAG | -.36957 | .27341 | .11968 | .47740 |
| CONCEXPL | -.49057 | .00506 | .17423 | .30223 |
| TRADCREA | -.15224 | .21420 | .08798 | .50629 |
| DIRINGEN | -.20963 | -.16120 | .06465 | .47519 |
| PLANVISI | -.48752 | .08072 | .04928 | .44331 |
| PRACTHEO | -.28158 | -.13218 | -.09279 | .21289 |
| INSISYST | .31370 | -.14508 | -.07268 | -.31267 |
| VARIREPE | .33786 | -.24523 | -.23732 | -.20477 |
| INVENORG | .54775 | -.22954 | -.00921 | -.37431 |
| INQUCRIT | .13488 | -.37526 | -.10734 | -.27940 |
| DIVERCON | .40082 | -.25784 | -.15202 | -.12317 |
| DIVEPREC | .44740 | -.08713 | -.13407 | -.25427 |
| CONCREAL | .23033 | -.03210 | .11558 | -.20570 |
| DIFFPERS | -.10818 | .21947 | .07192 | .43140 |
| USEINTUI | -.01591 | -.00542 | .17619 | .53023 |
| SEEPATTR | .10165 | -.16867 | -.02484 | .56064 |
| NEWSKILL | .00372 | -.06440 | -.01676 | .23685 |
| SEEMEANG | .22824 | -.09732 | .00303 | .63530 |
| INVENTIV | -.34315 | .04388 | .16782 | .57805 |

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| | | | | |
|---|---|---|---|---|
| CREATNEW | -.14054 | .13702 | .06457 | .63151 |
| PREFFACT | .26261 | -.10048 | .03181 | -.39884 |
| MECHANIC | .31472 | -.31125 | -.01979 | -.51245 |
| DISPEMOT | .07408 | .54129 | -.01070 | -.04164 |
| JUSTHARM | -.10317 | .42366 | -.01833 | .08836 |
| EVALOPEN | -.17911 | .46521 | .30775 | .07310 |
| IMPEPERS | .12837 | .38615 | .39371 | .19040 |
| PRINPEOP | -.16565 | .40939 | .08937 | -.03585 |
| EVALNONJ | -.07535 | .46184 | .04473 | .08473 |
| FACTCOMP | -.01917 | .71526 | .09778 | .05022 |
| LOGHUMAN | -.03465 | .48458 | -.08406 | .12740 |
| SKEPTRUS | -.04369 | .53045 | .13592 | -.19237 |
| STRIFORG | -.06582 | .63364 | .09087 | .09966 |
| EMPALOGI | .04899 | -.64951 | .07940 | -.03736 |
| CARICOOL | -.25363 | -.63964 | -.04893 | -.10962 |
| RECEPSEL | .07505 | -.41611 | -.17890 | -.04292 |
| SYMPFAIR | .16080 | -.53095 | .13062 | -.06993 |
| GULLSUSP | .06867 | -.46153 | -.05553 | .25251 |
| KINDANAL | .03432 | -.69280 | .02449 | -.00805 |
| FEELTHIN | .05523 | -.66859 | -.04658 | -.02352 |
| TENDRATI | .06333 | -.61248 | -.02077 | .06685 |
| ACCEDISC | .05112 | -.47894 | -.27833 | -.16282 |
| LIGHPRUD | .22659 | -.39929 | -.22102 | -.01426 |
| AVOIDCON | -.00584 | .32264 | -.32854 | -.13930 |
| EMOTIONL | .08340 | .57385 | .19636 | .10372 |
| SENSITIV | .01191 | .42240 | -.09712 | -.05226 |
| BUSINESS | .20681 | -.34768 | -.09844 | -.03394 |
| RESPADAP | -.38639 | .12398 | -.00387 | .34259 |
| PROMFREE | -.54711 | .28068 | .03798 | .15357 |
| TIMERELA | -.56683 | .19254 | -.04034 | .08436 |
| FLEXORGA | .62940 | -.15861 | -.02673 | -.15928 |
| RANDSEQU | .66723 | -.09327 | -.16949 | -.08781 |
| IMPUDELI | .44732 | -.25644 | -.15775 | -.04598 |
| IMPETASK | .60610 | -.10016 | .05922 | -.15748 |
| UNSCHEDU | -.59341 | -.00219 | .05013 | -.03773 |
| LASTMINU | -.39414 | -.13013 | .07810 | .11439 |
| UNEXPECT | -.54790 | .03130 | .13634 | .07841 |
| NOORGANI | -.51247 | .25346 | .05744 | .14806 |
| GOWIFLOW | -.53600 | .26517 | .04821 | -.11907 |
| LASTMINT | -.43102 | -.14681 | .07805 | .19436 |
| FORMOMEN | -.56020 | .22131 | .10761 | .03244 |
| ORDERIRR | -.55257 | -.06896 | -.07453 | -.01217 |
| THINKAHE | .44550 | -.08130 | .04292 | .26369 |
| IMPULSIV | .46596 | -.02141 | -.24828 | -.26589 |
| STRUTIME | .60396 | -.07722 | -.12976 | .03068 |
| ENJLISTS | .59867 | .03919 | .12809 | -.02379 |

| | | | | |
|---|---|---|---|---|
| HATERUSH | .48568 | .23238 | -.08225 | -.06349 |
| ROUCOMFR | .61346 | -.00229 | -.16704 | -.16286 |
| LCLOSURE | .33033 | -.01121 | -.06143 | -.01083 |
| BEONTIME | .52018 | -.05797 | .00729 | .04827 |
| COMMITMN | .33442 | .17942 | -.01482 | .07044 |
| PLANAHEA | .73715 | .01962 | .03003 | .05206 |

Table 12
Oblimin-Rotated Factor Pattern Matrix,
Factor Structure Matrix, and Factor Correlation Matrix
(n=221, v=93)

| Variable | Factor I | II | III | IV |
|---|---|---|---|---|
| Pattern Matrix | | | | |
| SOCIPRIV | -.04380 | -.01273 | -.69143 | .13668 |
| FRIEDIST | .13265 | -.23898 | -.56049 | -.00778 |
| PERSOSHY | .09304 | -.03467 | -.68780 | -.05599 |
| APPRMYST | .22797 | -.21925 | -.25060 | .13989 |
| MIXERLON | .01707 | -.14674 | -.72356 | .06932 |
| CONGRECL | .04708 | -.12970 | -.56275 | -.01270 |
| EXUBSERE | .02465 | .09495 | -.58836 | .05051 |
| GREGTIMI | .10099 | .27203 | -.59164 | -.18070 |
| QUIEEXPR | .04807 | -.14379 | .74094 | .18542 |
| REFLACTI | .12467 | -.20571 | .42734 | -.18606 |
| INTREXTR | .07534 | -.04186 | .66084 | .09561 |
| STILLANI | .20571 | .05617 | .53402 | .18065 |
| SOLIAMIC | -.07142 | .21538 | .58976 | .05585 |
| SILEGABB | .18283 | .00876 | .64830 | -.05414 |
| SHYPERSO | .02765 | .20719 | -.67213 | .06786 |
| PRESWRIT | -.11641 | .04468 | -.45549 | -.05550 |
| GRPPROJE | .15155 | .07249 | .39378 | -.16202 |
| RELAXSOC | .12778 | -.01230 | .69107 | -.11647 |
| LIKETALK | -.15280 | .42916 | .37337 | .02008 |
| NEWPEOPL | .00238 | .08584 | .62608 | .14123 |
| TALKOTHR | -.01341 | .08021 | .69111 | .07068 |
| REALINTU | .03775 | .29616 | .02197 | .38497 |
| PRECIMAG | .29666 | .23986 | .07192 | .44531 |
| CONCEXPL | .45351 | -.03964 | .14456 | .26281 |
| TRADCREA | .07605 | .19325 | .05072 | .49514 |
| DIRINGEN | .16028 | -.18755 | .04700 | .47138 |
| PLANVISI | .43587 | .04479 | .00778 | .40998 |
| PRACTHEO | .27373 | -.14474 | -.10693 | .20318 |
| INSISYST | -.26967 | -.11939 | -.04030 | -.28727 |
| VARIREPE | -.29293 | -.20818 | -.20534 | -.16529 |
| INVENORG | -.50016 | -.19681 | .04096 | -.33174 |
| INQUCRIT | -.07662 | -.35963 | -.07123 | -.25887 |
| DIVERCON | -.37156 | -.22594 | -.11869 | -.08001 |
| DIVEPREC | -.41317 | -.04980 | -.10284 | -.21632 |
| CONCREAL | -.21462 | -.02629 | .13694 | -.19572 |
| DIFFPERS | .04096 | .20347 | .03892 | .42258 |
| USEINTUI | -.05929 | -.02961 | .15726 | .53358 |

| | | | | |
|---|---|---|---|---|
| SEEPATTR | -.16286 | -.17317 | -.03428 | .58719 |
| NEWSKILL | -.02874 | -.06775 | -.02283 | .24501 |
| SEEMEANG | -.30693 | -.09784 | -.00783 | .67015 |
| INVENTIV | .26690 | .00314 | .13073 | .55539 |
| CREATNEW | .05407 | .11543 | .02668 | .62737 |
| PREFFACT | -.21515 | -.08381 | .06477 | -.38501 |
| MECHANIC | -.23989 | -.28848 | .03088 | -.48838 |
| DISPEMOT | -.09933 | .55369 | -.03655 | -.05300 |
| JUSTHARM | .07246 | .42370 | -.05017 | .06979 |
| EVALOPEN | .13113 | .43585 | .27635 | .03360 |
| IMPEPERS | -.19818 | .36284 | .37591 | .17671 |
| PRINPEOP | .14636 | .39945 | .06254 | -.06604 |
| EVALNONJ | .03883 | .45881 | .01303 | .06452 |
| FACTCOMP | -.03108 | .71474 | .05640 | .02369 |
| LOGHUMAN | -.00196 | .49360 | -.11916 | .11589 |
| SKEPTRUS | .03195 | .52736 | .11433 | -.22200 |
| STRIFORG | .01528 | .62935 | .05006 | .07333 |
| EMPALOGI | -.01464 | -.66108 | .12064 | -.01746 |
| CARICOOL | .31029 | -.65527 | -.01973 | -.11028 |
| RECEPSEL | -.03855 | -.40243 | -.15364 | -.01776 |
| SYMPFAIR | -.13419 | -.53873 | .17189 | -.04766 |
| GULLSUSP | -.07326 | -.46376 | -.03792 | .28001 |
| KINDANAL | .00219 | -.70177 | .06549 | .01492 |
| FEELTHIN | -.01452 | -.67017 | -.00660 | .00291 |
| TENDRATI | -.03853 | -.61655 | .01315 | .09311 |
| ACCEDISC | .00985 | -.45725 | -.24726 | -.13618 |
| LIGHPRUD | -.19546 | -.37460 | -.19236 | .02470 |
| AVOIDCON | .02443 | .35533 | -.34655 | -.13939 |
| EMOTIONL | -.14044 | .56799 | .16653 | .08682 |
| SENSITIV | -.02310 | .43717 | -.11979 | -.06157 |
| BUSINESS | -.18258 | -.33289 | -.07071 | -.00356 |
| RESPADAP | .34573 | .09989 | -.04047 | .31589 |
| PROMFREE | .52250 | .25011 | -.00565 | .10346 |
| TIMERELA | .56048 | .16730 | -.07829 | .03710 |
| FLEXORGA | -.61314 | -.12299 | .01381 | -.10703 |
| RANDSEQU | -.65608 | -.04457 | -.13625 | -.02720 |
| IMPUDELI | -.42840 | -.22295 | -.12582 | .00273 |
| IMPETASK | -.59762 | -.07195 | .09684 | -.11234 |
| UNSCHEDU | .60823 | -.03651 | .02841 | -.08743 |
| LASTMINU | .39111 | -.16058 | .06598 | .08658 |
| UNEXPECT | .54058 | -.00915 | .11129 | .03029 |
| NOORGANI | .48816 | .22287 | .01728 | .10062 |
| GOWIFLOW | .54525 | .23883 | .01708 | -.17422 |
| LASTMINT | .41977 | -.18077 | .06213 | .16591 |
| FORMOMEN | .55017 | .18577 | .07279 | -.02236 |

| | | | | |
|---|---|---|---|---|
| ORDERIRR | .57405 | -.09242 | -.09387 | -.05093 |
| THINKAHE | -.48591 | -.06713 | .05567 | .30544 |
| IMPULSIV | -.42776 | .02713 | -.22135 | -.22409 |
| STRUTIME | -.60928 | -.03684 | -.10415 | .08677 |
| ENJLISTS | -.61812 | .06097 | .15330 | .01657 |
| HATERUSH | -.49628 | .26838 | -.07426 | -.03033 |
| ROUCOMFR | -.59691 | .04587 | -.13803 | -.11106 |
| LCLOSURE | -.33205 | .01098 | -.04789 | .01790 |
| BEONTIME | -.53471 | -.03304 | .02990 | .09193 |
| COMMITMN | -.35932 | .19913 | -.01435 | .09347 |
| PLANAHEA | -.76237 | .05495 | .05734 | .10963 |

Structure Matrix

| | | | | |
|---|---|---|---|---|
| SOCIPRIV | -.09964 | -.10963 | -.68449 | .05565 |
| FRIEDIST | .03495 | -.30576 | -.58058 | -.05555 |
| PERSOSHY | -.00491 | -.12856 | -.68753 | -.10995 |
| APPRMYST | .20024 | -.21795 | -.24124 | .14513 |
| MIXERLON | -.07289 | -.24591 | -.73597 | -.01231 |
| CONGRECL | -.03858 | -.20762 | -.57750 | -.07034 |
| EXUBSERE | -.02357 | .01519 | -.56627 | .00218 |
| GREGTIMI | .02614 | .18403 | -.55816 | -.20049 |
| | | | | |
| QUIEEXPR | .15738 | -.01531 | .74459 | .26087 |
| REFLACTI | .11210 | -.14141 | .39287 | -.13154 |
| INTREXTR | .16894 | .07154 | .67351 | .17600 |
| STILLANI | .31372 | .17311 | .58540 | .28223 |
| SOLIAMIC | .03684 | .29749 | .61863 | .11756 |
| SILEGABB | .25011 | .12237 | .66586 | .05094 |
| | | | | |
| SHYPERSO | -.01329 | .11676 | -.63140 | .01983 |
| PRESWRIT | -.17683 | -.04058 | -.46852 | -.12309 |
| | | | | |
| GRPPROJE | .17389 | .13690 | .40589 | -.08486 |
| RELAXSOC | .18470 | .09628 | .69256 | -.01995 |
| LIKETALK | -.05169 | .46689 | .42028 | .05849 |
| NEWPEOPL | .11685 | .18859 | .65349 | .21237 |
| TALKOTHR | .09354 | .18539 | .70856 | .14482 |
| REALINTU | .15618 | .33241 | .10956 | .41690 |
| PRECIMAG | .42666 | .31950 | .18836 | .53180 |
| CONCEXPL | .52032 | .05635 | .21988 | .36858 |
| TRADCREA | .20815 | .24654 | .13908 | .53035 |
| DIRINGEN | .24055 | -.12629 | .08699 | .49553 |
| PLANVISI | .52710 | .12939 | .10853 | .50429 |
| PRACTHEO | .28534 | -.11206 | -.07465 | .23815 |
| | | | | |
| INSISYST | -.34850 | -.17942 | -.11957 | -.35603 |
| VARIREPE | -.37706 | -.28631 | -.28790 | -.26237 |
| INVENORG | -.58794 | -.27630 | -.08178 | -.44557 |
| INQUCRIT | -.18258 | -.39857 | -.15984 | -.30859 |
| DIVERCON | -.42986 | -.29463 | -.20450 | -.18577 |
| DIVEPREC | -.47629 | -.13130 | -.18172 | -.31606 |
| CONCREAL | -.24198 | -.04680 | .08733 | -.22801 |
| | | | | |
| DIFFPERS | .15788 | .24538 | .11714 | .45007 |
| USEINTUI | .06629 | .02566 | .20064 | .53528 |
| SEEPATTR | -.06657 | -.15474 | -.01886 | .53718 |
| NEWSKILL | .01097 | -.05653 | -.01106 | .23172 |
| SEEMEANG | -.18112 | -.08697 | .00998 | .59861 |
| INVENTIV | .39783 | .09593 | .22012 | .62428 |
| CREATNEW | .20117 | .17226 | .11456 | .64983 |
| | | | | |
| PREFFACT | -.29731 | -.12896 | -.01280 | -.42907 |
| MECHANIC | -.37246 | -.34926 | -.09035 | -.55614 |
| DISPEMOT | -.04710 | .53229 | .02754 | -.03644 |
| JUSTHARM | .13261 | .43032 | .02794 | .11091 |

| | | | | |
|---|---|---|---|---|
| EVALOPEN | .22426 | .49495 | .35953 | .12130 |
| IMPEPERS | -.07245 | .40697 | .42373 | .20110 |
| PRINPEOP | .18890 | .42163 | .13195 | .00016 |
| EVALNONJ | .10972 | .47023 | .09175 | .10776 |
| FACTCOMP | .06777 | .72099 | .16019 | .07582 |
| LOGHUMAN | .06802 | .48440 | -.03493 | .13968 |
| SKEPTRUS | .06401 | .53168 | .17286 | -.16471 |
| STRIFORG | .11322 | .64399 | .15194 | .12810 |
| | | | | |
| EMPALOGI | -.08451 | -.64642 | .01991 | -.05690 |
| CARICOOL | .20515 | -.62845 | -.09033 | -.09648 |
| RECEPSEL | -.10968 | -.43103 | -.21923 | -.07123 |
| SYMPFAIR | -.18926 | -.53335 | .07178 | -.09754 |
| GULLSUSP | -.07644 | -.45761 | -.08608 | .22672 |
| KINDANAL | -.07253 | -.69077 | -.03589 | -.02971 |
| FEELTHIN | -.09648 | -.67270 | -.10656 | -.05025 |
| TENDRATI | -.09293 | -.61245 | -.07253 | .04097 |
| ACCEDISC | -.10365 | -.50245 | -.32730 | -.19330 |
| LIGHPRUD | -.25902 | -.42490 | -.26823 | -.06316 |
| | | | | |
| AVOIDCON | -.00245 | .29708 | -.30571 | -.14371 |
| EMOTIONL | -.03328 | .58175 | .24217 | .11680 |
| SENSITIV | .00319 | .41220 | -.06461 | -.04638 |
| | | | | |
| BUSINESS | -.23239 | -.36582 | -.14182 | -.07319 |

| | | | | |
|---|---|---|---|---|
| RESPADAP | .41845 | .15944 | .04795 | .39065 |
| PROMFREE | .57375 | .32067 | .10414 | .22947 |
| TIMERELA | .57923 | .22692 | .01705 | .15740 |
| FLEXORGA | -.64864 | -.20367 | -.08848 | -.24157 |
| RANDSEQU | -.68342 | -.14667 | -.22395 | -.18025 |
| IMPUDELI | -.47007 | -.29352 | -.20947 | -.11530 |
| IMPETASK | -.61808 | -.13892 | .00336 | -.23138 |
| UNSCHEDU | .58907 | .03542 | .08669 | .03866 |
| LASTMINU | .39731 | -.09677 | .09797 | .16244 |
| UNEXPECT | .55902 | .07540 | .17761 | .15291 |
| NOORGANI | .53824 | .29240 | .11867 | .21987 |
| GOWIFLOW | .54038 | .29501 | .09940 | -.04200 |
| LASTMINT | .43947 | -.10817 | .10273 | .24582 |
| FORMOMEN | .57690 | .26195 | .16350 | .11268 |
| ORDERIRR | .54102 | -.03993 | -.04414 | .05139 |
| THINKAHE | -.42425 | -.09568 | .01915 | .20565 |
| IMPULSIV | -.49726 | -.07414 | -.29147 | -.33335 |
| STRUTIME | -.60826 | -.12009 | -.17341 | -.05273 |
| ENJLISTS | -.58894 | .00931 | .09015 | -.09110 |
| HATERUSH | -.47867 | .19467 | -.09719 | -.12084 |
| ROUCOMFR | -.63078 | -.05545 | -.21397 | -.24538 |
| LCLOSURE | -.33272 | -.03525 | -.08409 | -.05493 |
| BEONTIME | -.51615 | -.08711 | -.02937 | -.01809 |
| COMMITMN | -.31740 | .16007 | -.01838 | .03234 |
| PLANAHEA | -.72613 | -.02155 | -.01437 | -.03819 |

Factor Correlation Matrix

| | Factor 1 | Factor 2 | Factor 3 | Factor 4 |
|---|---|---|---|---|
| Factor 1 | 1.00000 | | | |
| Factor 2 | .12202 | 1.00000 | | |
| Factor 3 | .11942 | .14701 | 1.00000 | |
| Factor 4 | .20694 | .07382 | .10273 | 1.00000 |